sensor configured to sense three substantially orthogonal components of movement, and four keys. One hundred and twenty combinations can be effected with one hand without shifting a finger (e.g., the same as a full size QWERTY keyboard only you don't need two hands and a desk and a chair). Unmatched capabilities of two pointing devices independently controlled by thumb and wrist for gaming and screen browsing. Controls are consistent among all applications.

[0139] The advantages of the inventive active keyboard system include holding and operating the system with one hand, a comfortable non-obstructive grip, provision of natural wrist/thumb/finger moves, intuitive and consistent controls, and fast access to features and data. The screen of the active keyboard system uses the entire front surface, the keypad is reduced to four buttons located on the side, fingers do not shift, and are always on the keys, and the thumb joystick and movement sensor(s) are controlled by the wrist.

[0140] The inventive active keyboard system dynamically presents available choices on a display grouped to effect unambiguous selection of the available choices through use of input means, thereby providing users of the active keyboard system with a consistent set of techniques to perform all commonly used functions including entering alphanumeric text and data into the device using only one hand.

[0141] While the invention has been described with references to its preferred embodiment, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the true spirit and scope of the invention.

I claim:

1. An active keyboard system comprising:

a processor;

a memory communicatively connected to the processor;

a display communicatively connected to the processor;

input means for inputting data into said system, said input means including at least one selector, and a plurality of keys; and

active keyboard system software stored on the memory, said active keyboard system software being configured to dynamically present available choices on the display grouped to effect unambiguous selection of the available choices through use of said input means.

2. The active keyboard system according to claim 1, wherein said active keyboard system software comprises presentation code and filter code.

3. The active keyboard system according to claim 2, wherein said presentation code comprises grid presentation code to organize available choices on a visual grid and provide the visual grid to the display.

4. The active keyboard system according to claim 2, wherein said presentation code displays a selection pointer controlled by one of said at least one selector.

5. The active keyboard system according to claim 2, wherein said presentation code comprises step or scroll resolution code to enable scrolling.

6. The active keyboard system according to claim 3, wherein said grid presentation code configures the visual grid with at least one pane as a matrix with a plurality of columns and plurality of rows.

7. The active keyboard system according to claim 6, wherein said grid presentation code configures said at least one pane as a matrix with three columns and four rows.

8. The active keyboard system according to claim 6, wherein said grid presentation code configures said at least one pane as a matrix with one column and a plurality of rows.

9. The active keyboard system according to claim 3, wherein said grid presentation code configures the visual grid with plural panes.

10. The active keyboard system according to claim 3, wherein said grid presentation code configures the visual grid with three panes.

11. The active keyboard system according to claim 3, wherein said visual grid comprises a plurality of cells and said grid presentation code comprises grid population code to populate each of said plurality of cells with an alphanumeric character, a symbol, a music note, an icon, text, an ideogram, or a logogram.

12. The active keyboard system according to claim 2, wherein said presentation code comprises application adapter code to translate transactions between application code and presentation code.

13. The active keyboard system according to claim 2, wherein said presentation code comprises sound code to provide an audio announcement for a selected choice, a confirmation for completion of an action, and an alarm for failure to complete an action.

14. The active keyboard system according to claim 2, wherein said presentation code comprises feedback code to enhance user interaction with the system.

15. The active keyboard system according to claim 2, wherein said filter code is configured to separate intentional user input from accidental user motion.

16. The active keyboard system according to claim 2, wherein said filter code comprises external forces filter code to separate user input from effects of external forces.

17. The active keyboard system according to claim 4, wherein said filter code comprises step motion code configured to translate user intentions into precise movement of the selection pointer over a grid, and to allow readjustment of the system between steps.

18. The active keyboard system according to claim 2, wherein said filter code comprises sliding zero code to allow a user to change a position while operating the system.

19. The active keyboard system according to claim 2, wherein said filter code comprises adaptive threshold code to optimize operator interaction with the system via feedback.

20. The active keyboard system according to claim 2, wherein said filter code comprises calibration code to effect user and application preferences.

21. The active keyboard system according to claim 1, wherein said plurality of keys is configured to be operated by fingers without obstructing the display.

22. The active keyboard system according to claim 1, wherein said at least one selector comprises is a single selector.

23. The active keyboard system according to claim 22, wherein said single selector is a wheel, a track ball, a joystick, a rocker pad, a touch pad, a selector switch, a toggle switch, a key button, an N-state button, or an N-state selector.